

Remarks

Claims 1-5, 7-15 are pending in this action. Claims 1-5, 7-15 stand rejected. By this amendment claims 1- 4, and 7 have been amended. Applicants respectfully request reconsideration of all pending claims herein.

Claim Rejections - 35 U.S.C. § 112 Second Paragraph

The Office Action stated that claims 1-15 are rejected under U.S.C. 112 second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention. Specifically, for Claims 1 and 2, the Office Action stated that the limitation “forwarding... at each clock cycle” was unclear because it was not understood when the forwarding should occur, as there are no time units associated with “each clock cycle” and it was unclear whether the clock belonged to one of the LANs or the switch.

Claims 1 has been amended to remove the language “at each clock cycle” and incorporate the scheduler function for providing the packet forwarding control signal to remove confusion as to when the forwarding should occur and clarify that the output control block is driven by the control validation signal from the scheduler (See Benayoun Fig. 3,8, Para 28). Claim 2 has been canceled because the limitation of including a scheduler element in the system is incorporated into amended claim 1.

Based on the foregoing amendments to claims 1 and 2, and the dependency either directly or indirectly of the remaining claims 3-15 on claim 1, Applicants submit that the rejection to Claims 1 – 15 under 35 U.S.C. §112 second paragraph, has been overcome.

Claim Rejections - 35 U.S.C. § 103(a)

The Office Action stated that claims 1, 2, 4, 7 and 11 are rejected under 35 U.S.C. § 103(a), as being unpatentable over Holden (US 5,557,607) in view of U.S. Patent No. 6,205,145 issued to Yamazaki and U.S. Patent No. 5,509,008 issued to Genda.

In regards to claims 1 and 2, the Office Action stated that Holden teaches a data transmission system which includes a packet switcher, and a plurality of input and output ports, each pair defining a cross point, a buffer at each cross point, and a memory and data controller for forwarding packets to another buffer. The Office Action further stated that Holden does not teach the use of terminals as LAN adapters or a scheduler for forwarding packets at each clock cycle.

The Office Action further stated that Yamazaki teaches a data transmission system having a plurality of networks interconnected as a hub using a switch fabric and a plurality of adapters connected to the networks; and that Genda teaches forwarding/scheduling packets at each clock cycle. The Office Action stated that it would have been obvious to one of ordinary skill to add adapters for networks, including LANs, of Yamazaki and a scheduler for forwarding packets at each clock cycle of Genda to the system of Holden to make switch operable with numerous popular LANs and to control the operational speed of the switch.

Applicants respectfully submit that none of the references teach a memory block, which includes a memory and an associated memory controller, at each crosspoint where the memory controller is controlled by a scheduler, which subsequently controls all of the crosspoint memory controllers for each output line (See Benayoun Fig. 8).

Furthermore, Holden teaches away from using memory at each crosspoint (see Holden, Abstract "... A shared pool of memory is employed to eliminate the need to provide memory at every crosspoint", Col 1:56-59). Therefore, one of ordinary skill at the time of the invention would

not be motivated to provide a memory block and a memory controller at each crosspoint (See Benayoun Para. 27, Fig. 3,8), and Holden should be removed as a reference.

Applicant's respectfully submit that Yamazaki is non-analogous art because Yamazaki describes a fibre channel fabric (See Yamazaki, Abstract, Summary, Fig. 9-10, 19), which is used in storage area networks. A fibre channel fabric is a structure in which addressing of ports on a network of fibre channel is made independently of the physical location or address of the target port. Switches are responsible for passing fibre channel packets to the target port regardless of which fibre channel loop or switch the port physically resides. Since the instant invention relies on the physical connection of ports to their respective crosspoints, and specific target addresses located in the packet headers to operate, Yamazaki should not be applied as a reference.

Applicants have reviewed Genda, including references cited by Examiner, and have determined that Genda does not teach a scheduler to control memory blocks at each crosspoint (See Genda Fig. 1, 3-6 elements 531-534). Applicants understand the invention taught by Genda uses a priority scheme for packet arbitration (See Genda, Abstract, Col. 2 lines 52-59, and Col. 3 lines 4-12), and a clock signal (not a scheduler circuit) to control the input ports, whereas Applicants' invention uses a clocked scheduler (500) to control corresponding memory blocks at the crosspoints (See Benayoun Figs. 3, 8, Para 53-54), which subsequently send packets to the associated output ports.

Based on the above arguments that Holden teaches away from Applicants' invention, Yamazaki presents non-analogous art, and Genda does not teach a scheduler circuit, Applicants respectfully submit that no prima facie case of obviousness has been established. Therefore, Applicants respectfully submit that the rejection of independent Claim 1, as amended, under 35 U.S.C. §103(a) has been overcome. Claim 2 is canceled.

Regarding claims 4, 7, and 11, Applicants respectfully submit that since the rejection to claims 1 and 2 under U.S.C. §103(a) has been overcome, the rejection to claims 4, 7, and 11 are likewise overcome by virtue of their dependence on claims 1 and 2.

Conclusion

Based on the foregoing, it is respectfully submitted that the pending claims in the subject patent application are in condition for allowance and that the application may be passed to issuance.

The Examiner is urged to call the undersigned at the number listed below if, in the Examiner's opinion, such a phone conference would aid in furthering the prosecution of this application.

Respectfully submitted,
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